



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,196	01/23/2007	Yoshiyuki Kono	Q95815	8443
23373 7590 11/05/2009 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER NELSON, LINDSAY ANN				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
11/05/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTO@SUGHRUE.COM
PPROCESSING@SUGHRUE.COM

Office Action Summary

Application No.

10/587,196

Applicant(s)

KONO, YOSHIYUKI

Examiner

LINDSAY NELSON

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

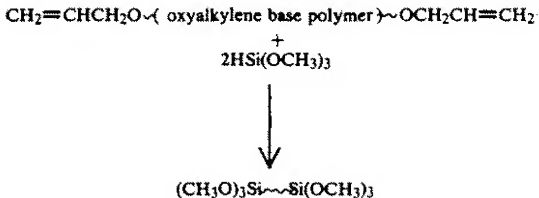
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S5/ICE)
Paper No(s)/Mail Date 07/14/2009
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION***Response to Arguments***

1. Applicant's arguments filed 07/14/2009 have been fully considered but they are not persuasive.
2. Applicant argues that the number of hydrolyzable groups contained on the polymer (A) "is not particularly limited" and "does not teach or suggest the curable polymer composition that is able to overcome disadvantages derived from the organic polymer (A) containing a reactive silyl group represented by the formula (1) wherein a is 3". However, applicant's attention is drawn to column 4, line 30 – column 5, line 8 of Yukimoto where the example of the preparation of the oxyalkylene base polymer which is preferably used as (A) is as follows

Example of the hydrosilylation reaction

which clearly shows a silicon group containing three hydrolyzable groups (where instant a is 3).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 21 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the molecular weight of polymer (B), does not reasonably provide enablement for the molecular weight of polymer (A). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

5. While the molecular weight of the actual product polymer (B) is disclosed, the examples 1-12 show only the molecular mass of the *starting* material for making polymer (A) and not the actual molecular mass of polymer (A).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

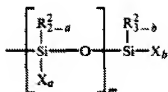
Art Unit: 1796

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5-10, 13, 14, 16-17, 19-23 are rejected under 35

U.S.C. 102(b) as being anticipated by Yukimoto, US Patent number 4,983,700 (hereinafter Yukimoto).

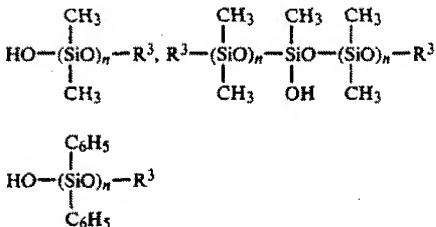
3. In regards to claims 1, 2, 3, 5, 6, 8, 9, 13, 14, 16, 17 and 19, Yukimoto discloses an oxyalkylene base polymer with a backbone of -R1-O- wherein R1 is a substituted or unsubstituted divalent hydrocarbon group having 1 to 12 carbon atoms (column 2, lines 50 - 64) with at least one silicon-containing reactive group (abstract) bonded to the backbone of the formula



wherein R2 is a substituted or unsubstituted C1-C40 organic group, X is a hydroxyl group or a hydrolysable group, a is 0 - 2, b is 0 - 3 (reads on the claimed a value), and m is an integer of 0 - 19, and when two or more R2 groups are present they may be the same or different, and when two or more X's are present they may also be the same or different (column 3, lines 6 - 26) and has 1.1 - 4 silicon-containing reactive groups on the average per molecule (column 4, lines 14 - 15) which reads on the claimed (A) polymer. Also, Yukimoto discloses that the oxyalkylene base polymers may be used independently or in a mixture of two or more of them (column 4, lines 20 - 22), which reads on the claimed (B) organic polymer.

Art Unit: 1796

4. In regards to claims 7 and 20, Yukimoto further discloses that the oxyalkylene polymer should have a molecular weight of 3,000-30,000 (column 4, lines 18 – 22). The specification does not give reason for a molecular weight to go below 3,000, thus the range is deemed anticipatory over the claimed range.
5. Regarding claims 21-23, Yukimoto further discloses (B) the addition of at least one compound which has one silanol group in the molecule (abstract). Furthermore, Yukimoto discloses the following formulas as examples of the compound having one silanol group



wherein R³ is an alkyl group of 1-20 carbons and n is 0 to 40 (column 5 line 42 – column 6 line 26). The examples above show that the number of reactive silyl groups falls within the claimed range. Furthermore, the examples show a composition which has under 9,000 for the molecular mass of (A) (combined total of the end groups and the oxyalkylene base polymer), and the molecular mass of (B) as shown in the formula above can be just under 3,000, which reads on the claimed composition.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 4, 10-12, 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yukimoto.

9. In regards to claims 4, 11, 12, 15 and 18, Yukimoto further discloses that the oxyalkylene base polymer may be prepared by various methods, including reacting the oxyalkylene base polymer having a first functional group Y with a compound having the silicon-containing reactive group and a second functional group Y' which reacts with the first functional group Y, whereby the silicon-containing reactive group is introduced in the oxyalkylene base polymer (column 4, lines 23 – 30). Yukimoto fails to teach the specifically claimed compound-to-polymer mole ratio, but because the range of Yukimoto falls within the claimed

Art Unit: 1796

range and would not result in a lower adhesive property, it is deemed obvious over the claimed range.

In regards to claim 10, Yukimoto further discloses that a mixture of two of the oxyalkylene base polymers can be used in the compound wherein the bond strength is increased when used as an adhesive (column 10, lines 63 – 68), but fails to teach that the weight of second polymer should be less than the first by at least 1,000. However, because the higher the molecular weight the higher the viscosity as is known, it would be obvious to one skilled in the art at the time of the invention to use lower molecular weight polymers to keep the viscosity of the adhesive lower to improve the adhesive properties.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will

Art Unit: 1796

the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINDSAY NELSON whose telephone number is (571)270-7735. The examiner can normally be reached on Monday - Thursday, 9 am - 5 pm est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LN

Application/Control Number: 10/587,196

Page 9

Art Unit: 1796

/Randy Gulakowski/

Supervisory Patent Examiner, Art Unit 1796